

Health-related Quality of Life of Mothers at 12 Weeks after Normal Vaginal Birth in Selected Hospitals in Enugu Metropolis, Nigeria

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ABSTRACT:

The process of birth may mean extra pressure on a mother's wellbeing, and this could affect her health-related quality of life (HRQoL). Due to paucity of published Nigeria based studies on HRQoL, this study assessed the postpartum HRQoL of mothers at 12 weeks after normal vaginal birth in selected hospitals in Enugu metropolis. The study adopted a cross-sectional descriptive design. Four hospitals were selected for recruitment of participants. A total of 79 participants who gave birth between August 2015 and July 2016 were enrolled into the study using purposive sampling. Adapted RAND-36 questionnaire was used in measuring HRQoL. Data was collected from each participant after informed consent and ethical clearance have been obtained. Descriptive statistics and Analysis of Variance (ANOVA) were used to analyze collated data. Level of significance was set at 0.05. The mean (SD) age and parity of participants were 34.17 (5.56) and 3 (1) respectively. Findings revealed that mean (SD) HRQoL was 58.14 (15.47). However, participants rated their physical functioning and role limitation due to emotional problem at score range 0 - 49. There was no significant difference in HRQoL among the participants, based on age and parity. The findings demonstrated that in this group of postpartum mothers at 12 weeks after normal vaginal birth, HRQoL was moderate, but there was poor physical functioning and role limitation due to emotional problem. It is recommended that healthcare providers should consider postpartum counselling on physical and emotional aspects of maternal health to ensure a quicker return to optimal maternal HRQoL.

Keywords: Quality of life, postpartum, vaginal birth, Nigeria

INTRODUCTION:

Childbirth has a major impact on women [1]. It is an experience full of change, enrichment, and challenges for mothers, couples and the family unit. Childbirth takes not just one's mind and body through a stream of change; it also takes the family through psychological adjustments. It is a time when couples as family confront their fears and expectations about becoming parents. In other words, parenthood may have physical and psychological changes in both mother and father depending on the circumstances of pregnancy, labour and mode of birth.

In this study vaginal childbirth which is the natural method of birth for humans refers to normal/spontaneous vaginal birth [2]. Pregnancy and motherhood may have some minute but significant changes in a mother's mental/cognitive ability [3, 4]. Since the brain controls or regulates the functioning of the human body, it may be logical to assume a resultant change in functioning of the mother's body.

According to World Health Organization (WHO) statistics, the highest maternal mortality and morbidity are seen in postpartum period (period following childbirth) [5]. The postpartum period is accompanied by significant changes in women's quality of life [6]. Huang et al [1] noted that studies have reported that the postpartum period is a time when women complain of numerous physical or psychological problems such as fatigue/physical exhaustion, pain, sex-related concerns, haemorrhoids, constipation, breast problems, anxiety, stress,

depression, sleep disorders, bleeding, endometriosis, urinary incontinence, post-traumatic stress disorders, increase in workload and decrease in time on their own. In addition, these problems have a significant effect on the physical, emotional and social health, breastfeeding, relationships with family, community, childcare and housework [5]. Postpartum mothers have to cope not only with body changes but also with new responsibilities involved in the role of a mother. Therefore the process of birth and motherhood may mean extra pressure on the functioning of a mother's general system or her health and wellbeing during the postpartum period, which in turn could affect her quality of life.

One of the components of the broadened view of maternity care has been the adoption of enhancement in quality of life as one of the aims of prenatal and postnatal care [7]. Quality of life (QoL) is the effect of the physical and social environment on an individual, and the ontological and emotional reactions to his/her environment [5]. An individual's perceived meaning to the multidimensional experience of physical health, adjustment to socio-environmental demands, and coping with activities of daily living qualifies health-related quality of life (HRQoL). In other words, a mother's perceived feeling of comfort and satisfaction with ability to cope with activities of daily living amounts to her HRQoL. The WHO definition of HRQoL includes six dimensions: physical health; psychological-emotional status; level of independence; social relationships; spiritual dimensions; and environmental situations [5]. Sadat et al [8] noted that

several studies confirm that socio-economic deficiencies and medical problem are risk factors for decreased HRQoL and depressive symptoms in women during the postpartum period. If a variety of medical, psycho-social and obstetric factors affect the HRQoL of a mother after childbirth, a mother's negative perception of her own health may have an unhelpful impact on their infant care behavior. The health of women after childbirth may be a primary contributor to their children's health [1].

Many studies have been carried out regarding HRQoL within the postpartum period. Majority of these studies were carried out outside Africa. Compared with many non-African countries, Nigeria has many discrete traditions, customs and habits. Perceptions of HRQoL by postpartum women in Nigeria may also be peculiar under the different cultures and environment. Based on the premise that "HRQoL is a multidimensional concept that affects performance of the individual in physical, psychological, social, and spiritual aspects of life and can be affected by political, cultural, economic and spiritual beliefs [5]"; assessing HRQoL in the postpartum period within the Nigerian context, especially in small towns or settlements may provide healthcare professionals and governments with basis for further health promotion of women's and infant's postpartum health.

This study described the HRQoL of mothers at 12 weeks after normal vaginal birth in selected hospitals in Enugu metropolis, Nigeria.

METHODS

A cross-sectional descriptive design was used for the study. The study was carried out from August 2015 to July 2016 among women who attended four selected urban hospitals within Enugu metropolis for childbirth twelve weeks prior. Ethics Committee of University of Nigeria Teaching Hospital approved the study protocol (Approval No. UNTH/CSA/329/OL.5).

A total of 79 participants who attended the selected hospitals for twelve weeks postpartum medical check-up, and met the inclusion criteria were enrolled into the study. Twelve weeks following childbirth was chosen as time frame for this study because the researcher expects that the strain of childbirth would have dwindled and HRQoL had returned to optimum. The inclusion criteria were; willingness to participate in the study, women who had normal vaginal birth, 12 weeks after childbirth, women aged 15 - 49 years at the time of data collection, women with a living newborn, and women without postpartum complications at childbirth. The exclusion criteria were; premature

birth, congenital abnormality, acute stressful events during the course of study (e.g., loss of a family member or divorce).

The research team explained the aim of the study to the study participants. The study participants were given thirty minutes to consider their participation. The research team obtained signed consent from the study participants. A structured questionnaire was used to elicit socio-demographic characteristics and obstetric variables of the study participants. HRQoL was assessed using the RAND-36 version 1.0 (SF-36) questionnaire (a free questionnaire designed by Research And Development Corporation).

The RAND-36 version 1.0 (SF-36) questionnaire is a well-known generic health related QoL instrument and proved to be highly feasible, reliable and is a good choice to measure health related QoL after childbirth [8]. It consists of 36 items, organized into eight scales: General health, Vitality, Physical functioning, Role limitation due to physical problems or role physical, Bodily pain, Role limitation due to emotional problems or role emotional, social functioning, and Emotional wellbeing. The scores on each subscale range from 0 to 100 with higher scores indicating a better condition. Also, the scores for the general HRQoL range from 0 to 100 averaged from the subscales with higher scores indicating a better condition.

For the present study, the RAND-36 version 1.0 (SF-36) questionnaire was adapted to meet the needs of the study. The adaptations that were made were converting the phrase "within the past 4 months" to within the past 4 days. The adaptation was made because the present study considers 12 weeks postpartum mothers. For the purpose of this study, the general HRQoL was operationally categorized as 0 - 49 = poor, 50 - 69 = moderate, 70 - 100 = good HRQoL. The adapted questionnaire was translated to a Nigerian local dialect (Igbo) by an Igbo language expert. The Igbo version of the questionnaire was translated back to English by an English language expert. Back and forth cycles of translation was carried out until very similar results were obtained. The research team investigated the reliability of the adapted RAND-36 (Igbo version) questionnaire in a pilot study using eight respondents who were not included in the main study. All scales of the adapted RAND-36 (Igbo version) questionnaire met a minimum reliability of standard (Cronbach's alpha correlation > 0.7). No further amendment to the adapted RAND-36 (Igbo version) questionnaire was made after the pilot study. The research team gave the study participants the adapted RAND-36 (Igbo version) questionnaire to fill

and return to an anonymous box within 24 hours. Data was collected once from each participant at 12 weeks following childbirth. Collected data was subjected to descriptive statistics (frequency, percentage, mean, standard deviation). Analysis of Variance (ANOVA) was used to compare HRQoL based on age and parity. Level of significance was set at $P < 0.05$. All data was analyzed with the aid of Statistical Package for Social Sciences (SPSS) software version 21 (SPSS Inc., Chicago, IL, USA).

RESULTS

Enugu metropolis is a city in the south-east Nigeria. The selected hospitals within the metropolis include one federal teaching hospital, one federal military hospital, one state teaching hospital and one private hospital in which all the participants in the study gave

birth. The responses of 79 participants were fit for analysis. The demographic characteristics of the participants are given in Table 1. Mean (SD) age was 34.17 (5.56) years with age ranging from 23 to 46 years. Mean parity was 3 (1) children with parity ranging from 1 to 5. Most (76, 96.2%) of the participants were currently married. 29 (36.7%) had only primary education, 24 (30.4%) had also secondary education, and 26 (32.9%) have had tertiary education.

Table 2, shows mean scores of the participants in all HRQoL subscales. The participants rated their general HRQoL at 58.14 (15.47). The participants rated their physical functioning at 40.23 (21.91), as well as role limitation due to emotional problem at 43.30 (22.96).

Table 1: Demographic Characteristics of the study participants (N = 79)

Category	Details
Age (years), mean (SD)	34.17 (5.56)
Parity , mean (SD)	3 (1)
Marital Status , n (%)	
Single	1 (1.27)
Married	76 (96.20)
Separated	2 (2.53)
Religion , n (%)	
Christianity	76 (96.20)
Islam	3 (3.80)
Educational level , n (%)	
Primary	29 (36.71)
Secondary	24 (30.38)
Tertiary	26 (32.91)

Table 2: HRQoL Subscale scores of study participants (N = 79)

HRQoL Sub-scales	Score 0 – 49 n(%)	Score 50 – 69 n(%)	Score 70 – 100 n(%)	HRQoL Mean (SD)
General health	9 (11.4)	19 (24.0)	51 (64.6)	73.25 (11.14)
Energy (Vitality)	12 (15.2)	49 (62.0)	18 (22.8)	62.10 (9.58)
Physical functioning	57 (72.1)	13 (16.5)	9 (11.4)	40.23 (21.91)
Role physical	14 (17.7)	47 (59.5)	18 (22.8)	55.63 (28.63)
Pain	17 (21.5)	51 (64.6)	11 (13.9)	63.17 (11.45)
Role emotional	55 (69.6)	18 (22.8)	6 (7.6)	43.30 (22.96)
Social functioning	11 (13.9)	56 (70.9)	12 (15.2)	67.25 (11.23)
Emotional Wellbeing	14 (17.7)	18 (22.8)	47 (59.5)	60.15 (6.89)
General HRQoL	24 (30.4)	34 (43.0)	21 (26.6)	58.14 (15.47)

Decision rule: score of 0-49 = poor, 50-69 = moderate, 70-100 = good

Table 3: HRQoL scores of study participants arranged based on age range (N = 79)

Age (Years)	Score 0 – 49 n(%)	Score 50 – 69 n(%)	Score 70 – 100 n(%)	HRQoL, Mean (SD)	ANOVA P-value
23-28	1 (12.5)	5 (62.5)	2 (25.0)	66.8 (21.2)	0.8356
29-34	4 (10.5)	27 (71.1)	7 (18.4)	61.4 (20.4)	
35-40	4 (18.2)	12 (54.5)	6 (27.3)	62.8 (8.8)	
41-46	3 (27.3)	6 (54.5)	2 (18.2)	58.6 (18.6)	

Decision rule: score of 0-49 = poor, 50-69 = moderate, 70-100 = good; $P < 0.5$ significant.

Table 4: HRQoL scores of study participants arranged based on parity (N = 79)

Parity	Score 0 – 49 n(%)	Score 50 – 69 n(%)	Score 70 – 100 n(%)	HRQoL, Mean (SD)	ANOVA P-value
1	6 (26.1)	13 (56.5)	4 (17.4)	62.1 (24.2)	0.9411
2	3 (16.7)	10 (55.6)	5 (27.7)	53.5 (25.1)	
3	3 (25.0)	7 (58.3)	14 (16.7)	60.4 (18.7)	
4	1 (10.0)	6 (60.0)	3 (30.0)	60.1 (15.5)	
5	3 (18.8)	9 (56.2)	4 (25.0)	61.4 (26.0)	

Decision rule: score of 0-49 = poor, 50-69 = moderate, 70-100 = good; $P < 0.5$ significant.

Table 3 shows the HRQoL mean scores of the participants arranged based on age range. Using ANOVA, Table 3 revealed no significant difference in HRQoL based on age ($P = 0.84$). Across age ranges, the participants had HRQoL between 58 and 67. The lowest HRQoL score was obtained among the 41 to 46 year olds (58.6 (18.6)). The highest HRQoL score was obtained among the 23 to 28 year olds (66.8 (21.2)).

Table 4 shows the HRQoL mean scores of the study participants arranged based on parity status. Using ANOVA, Table 4 revealed no significant difference in HRQoL based on parity ($P = 0.94$). Across parity 1 to 5, the participants had HRQoL between 53 and 63. The lowest HRQoL was obtained among mothers who had a parity of 4 (60.1 (15.5)). The highest HRQoL was obtained among mothers who had a parity of 1 (62.1 (24.2)).

DISCUSSION

An adapted RAND-36 version 1.0 (SF-36) was used in the present study to describe HRQoL among mothers at 12 weeks after normal vaginal birth in selected hospitals. Results of the present study indicate that majority of the participants were poor in physical functioning and role limitation due to emotional problem; moderate in vitality, role limitation due to physical problem, pain and social functioning; and good in general health and emotional wellbeing. On physical function, the participants reported poor ability for moving a chair or cupboard, lifting or carrying foodstuff, climbing several flights of stairs, running bending, walking

more than a mile, kneeling, stooping, walking several buildings and lifting heavy objects. Nevertheless, they reported moderate ability for bathing and dressing. On role limitation due to emotional problems, the participants responded that they poorly cut down time spent on work and accomplished tasks less than they would like. They also did not do work as carefully as usual. Majority of the participants had moderate HRQoL based on age and parity. There was no significant difference in HRQoL based on age and parity.

The finding of the present study is not completely in line with a prospective study comparing the HRQoL of mothers at 6-8 weeks and 12-14 weeks postpartum in Iran, where Bahrami et al [5] reported that at 12 – 14 weeks postpartum, vaginally delivered women had moderate in physical function (59.5 (17.31)) but poor role limitation due to emotional problem (47.51 (17.56)). This disparity in finding could be related to differences in sampling method. In the present study no sampling was done, all mothers who met the inclusion criteria were used for the study where as Bahrami et al [5] used non probability quota sampling method. Using all mothers available may have eliminated the bias which non probability quota sampling method may have introduced in Bahrami et al [5]. Furthermore, Majzoobi et al [6] found good physical functioning (86.28 (16.92)) and role limitation due to emotional problem (77.98 (33.38)) among 8 weeks postpartum Iranian mothers in a prospective study. The difference between findings of the present study and Majzoobi et al [6] may be connected to differences in

education (a socio-demographic variable). The participants in the present study were almost equally divided between those who had primary (36.7%), secondary (30.4%) and tertiary education (32.9%). In Majzoobi et al [6], the respondents were distributed as primary (63.7%), secondary (26.6%) and tertiary education (9.7%). Since in Majzoobi et al [6], majority of the respondents have primary education, this may have produced biased responses to the individual questionnaire items. This bias may have been offset in the present study. In terms of HRQoL based on parity, the findings of the present study is in agreement with Mousavi et al [7] who reported moderate (50 – 69) HRQoL across parity status.

The finding of the present study contributes to understanding the nature of HRQoL in mothers at 12 weeks after vaginal birth based on age and parity. The result of the present study showed that vaginally delivered mothers had poor HRQoL subscale scores in physical functioning and role limitation due to emotional problem. This therefore underlines the need for healthcare providers to continually craft opportunities for discourse between all facets of health workers and society on postpartum health and wellbeing. The findings of the present study may be of use to governments in crafting policies that may favour postpartum health. For all inclusiveness, it is recommended that healthcare providers should consider postpartum counseling on physical and emotional aspects of maternal health to ensure a quicker return to optimal maternal HRQoL.

STUDY LIMITATIONS

The present study utilized an adapted RAND-36 version 1.0 (SF-36) questionnaire translated into local dialect for measuring postpartum HRQoL. RAND-36 version 1.0 (SF-36) questionnaire is a generic instrument which is not specifically designed for postpartum mothers. This might be considered a limitation of the study. The sampling technique used in the study is purposive. Purposive sampling may have generated a non-parametric sample. The non-parametric sample may have imposed some degree of bias on the study. This might also be considered a limitation of the study. Another limitation to the study could be that the number of participants may not have been enough to make conclusions pertaining to HRQoL based on age and parity. It is possible that a study using a larger number of participants would produce different results.

CONCLUSION

The findings of the present study suggest that in this group of postpartum mothers at 12 weeks after vaginal birth HRQoL based on age and parity was moderate. Meanwhile, there was poor physical functioning and role limitation due to emotional problem.

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